PATENT ABSTRACTS OF JAPAN

(54) **PORTABLE TERMINAL EQUIPMENT, STORAGE DATA UPDATING METHOD AND FIRMWARE-UPDATING METHOD**

(57)Abstract:

PROBLEM TO BE SOLVED: To securely update an internal program, such firmware.

SOLUTION: When a first CPU 10 cannot receive an ACK signal returned for the purpose of informing confirmation from a second CPU 11, while data are transferred in a system fitted to a program for update, which the second CPU 11 performs, it transmits an output switching instruction to a protocol converter 15. The protocol converter 15 switches the output destination of serial data in a serial analysis part 16 to a protocol conversion processing part 17 from a serial line 18. When the protocol conversion processing part 17 receives serial data from the serial analysis part 16, it extracts a signal for transferring data to the second CPU 11 and transmits it. As a result, data for rewriting a storage content in a non-volatile memory 14 can be transferred in a system which is suitable for boundary scanning.